The present invention provides a gaming device that has a player selectable award feature that may be implemented with a primary or bonus game. More specifically, the present invention provides a processor controlled gaming device that randomly generates a plurality of positions or digits of an award and enables the player to pick which position or digit receives a first randomly generated number, which digit receives a second randomly generated number, etc., until each of the positions have a number, whereby the gaming device determines the player's ultimate award. This sequence or feature may be employed in a bonus game, in a known base or primary game or in any stand alone game.